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NEWS RELEASE

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Almost Poetic: Plutonium to Pluto
by the Idaho Congressional Delegation

On January 19, as NASA launched the "New Horizons" probe to Pluto, we felt very proud that Idahoans played such an important role in the mission. Nine years from now when we receive images and scientific information from the outermost planet in our solar system, the power that sends this information back to Earth will come from a plutonium-powered battery built by our own Idaho National Laboratory (INL).

As was the case with the plutonium-powered Cassini mission to Saturn, in deep space there is simply not enough sunlight for solar or any other power source to be practical. For a solar panel to generate enough electricity that far from the sun, the array would have to be 6,430 square feet--about the size of a football field.

Several historic aspects of this mission should be particularly interesting to Idahoans. New Horizons is the fastest manmade object ever. The Apollo missions took days to reach the moon, but New Horizons traveled past the moon in less than 10 hours. Fittingly, the plutonium fuel that is powering the instruments on our first mission to the last unexplored planet was named after the planet itself. Pluto was discovered in 1930, and although plutonium was discovered in 1941, its discovery was not announced until after World War II because it was part of the Manhattan Project.

The mission to Pluto is one of the most important exploration missions NASA has ever undertaken. In traveling there, New Horizons could provide invaluable information about how our solar system was formed. The lessons learned will have a huge impact on our understanding of the universe.

With goals so lofty, it is comforting to know that scientists and policymakers alike have been unwavering in their support of deep space research, even as skeptics continue to oppose progress of any kind and view any risk as too much, no matter what humanity stands to gain.

Opponents of the INL's role as a preeminent nuclear energy laboratory may never find anything good to say about the non-weapons nuclear work performed in Idaho. Even a plan to consolidate all of the plutonium space battery work in Idaho, rather than scattering it among national labs across the country, is something that skeptics oppose.

Thankfully, the Department of Energy (DOE) and the Idaho Congressional Delegation have remained steadfast in our insistence that the plutonium battery programs be consolidated at one site, the

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INL. Currently, the material to encapsulate the plutonium-238 (Pu-238) is fabricated at the Oak Ridge National Laboratory in Tennessee. These are then shipped to Los Alamos, New Mexico, where the Pu-238 is purified and encapsulated. Finally, the capsules are shipped to INL for assembly as a space battery.

Consolidation of this program at the INL reduces the number of sites and people handling the Plutonium-238, reducing risks of all kinds. Through modifications to Idaho's Advanced Test Reactor (ATR), materials for the space batteries can be produced, refined, packed and assembled all at one laboratory, which means improved security and efficiency, and in the end, lower costs as well.

The ATR is the most versatile nuclear test reactor in the world. Throughout its four-decade history, the reactor has been used to test commercial and Navy fuel for safety purposes. Today the reactor can be used to produce medical isotopes, and it will be a critical resource in supporting the development of the Next Generation Nuclear Plant in Idaho. Upgrades and replacements of reactor components result in essentially a new reactor every ten years or less, keeping the reactor on the cutting edge and available for evolving missions to support nuclear power research of all kinds.

Supporting NASA's mission to Pluto is exactly what we and the DOE had in mind when we designated the INL as this country's lead laboratory for nuclear energy, and it follows in Idaho's proud tradition of providing safe nuclear energy technologies for more than half a century. Idaho can be proud of our undertaking to ensure safe nuclear power throughout the United States, the world, and now for the exploration of deep space.

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